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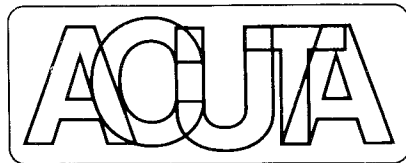
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NEWS

Association of College & University Telecommunication Administrators

THE VOICE OF TELECOMMUNICATIONS IN HIGHER EDUCATION

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CANADA BELL, BY OUTSMARTING GOVERNMENT,
MAY SHARPLY REDUCE REGULATION OF ITSELF

This article is a reprint from the "Wall Street Journal," September 9, 1982. Written by Frederick Rose and Alan Freeman, Staff Reporters.

Not often does a utility escape the grasp of tenacious regulators, but Bell Canada is within inches of just such a break.

Thanks to a quirk in corporate law, smooth lawyering and deft political timing, Canada's largest telephone company may soon remove its most profitable and fastest-growing operations from regulators' scrutiny.

That step, which could result in major gains for the company in years to come, is the goal of a carefully laid plan that has dazzled even Bell Canada's critics. A lawyer for a consumer group calls the plan "audacious." Another consumer advocate confesses a "sneaking admiration" for Bell Canada.

Somewhat less impressed are dozens of government officials, whom Bell Canada appears to have outmaneuvered. The company's strategy is so complete that Ottawa has little option but to fight a rearguard court case that some experts consider to be of questionable legal merit.

Bell Canada isn't related to American Telephone & Telegraph Co.

A QUIET MOVE

Bell Canada's maneuvers began last spring, when, without announcement, the company applied to the Canadian government's Department of Consumer and Corporate Affairs for legal status under the general law that governs most Canadian companies. The application was handled perfunctorily. "We don't ask questions about a company's intent when they apply," said Frederick Sparling, director of the government's corporations branch.

But it appears that Mr. Sparling's agency didn't realize the implications of the Bell Canada move. A senior government official says Mr. Sparling told him the new legal status was routine. In fact, the seemingly innocuous move was the key to Bell Canada's plan.

Bell Canada's trick was to slide from one set of rules to another. The company has long been governed by its own special act, which tied it to the traditional limits of a regulated utility. Once Bell Canada came under the general law, known as the Canada Business Corporations Act, it acquired a wide range of powers to make corporate changes, without intervention by regulators.

Neither Bell Canada nor Mr. Sparling's officials advised the government agency that oversees the telephone company, the Canadian Radio-television and Telecommunications Commission, that the corporate switch was coming. "We learned about it from the newspapers," complains an official at the agency.

Bell Canada's full intent was revealed in late June, when it announced plans to use its new

powers to reorganize the company. In effect, the company plans to turn itself inside out. No longer will Bell Canada, a regulated utility, stand at the top of a group of profitable manufacturing and service companies. A new, unregulated company, Bell Canada Enterprises Inc., will be the parent of 80 companies. Bell Canada Enterprises will own them directly, thus shielding almost all the units from regulation.

Among the subsidiaries will be Bell Canada, the phone company that, along with a few related concerns, will remain as the only companies in the group still subject to CRTC regulation.

Those who know Bell Canada aren't surprised either by its efforts to evade regulation or by the meticulous planning involved in the reorganization. Recent decisions by the CRTC have made tough demands on the company, prompting its chairman and chief executive, A. Jean de Grandpre, to accuse the agency of singling out Bell Canada for harsher treatment than other companies receive.

GOOD LEGAL ADVICE

The CRTC, for instance, deemed that income earned outside normal domestic telephone service should be counted entirely as part of the utility's regulated returns. As a result, profits from a \$1.2 billion (Canadian) contract in Saudi Arabia were used to lower telephone bills in Canada. And a portion of the income from Bell Canada's 55% holding in Northern Telecom Ltd., a fast-growing telecommunications-equipment manufacturer, as well as the returns from other investments, were also ruled to be part of Bell Canada's regulated return.

"The CRTC really painted them into a corner," says a government economist close to the case. Others also say the utility was forced to attempt a change.

In the spirit of "Don't get mad, get even," Bell Canada brought its considerable resources to bear on the problem. An internal task force was set up. Company sources say Mr. de Grandpre personally pushed the effort. Mr. de Grandpre, who came up through the company's legal department, is from a family of distinguished lawyers. Outsiders say the utility is unusually skilled in regulatory and administrative matters. "The quality of their legal advice has never left anything to be desired," says Ralph Simmonds, a professor of law at Montreal's McGill University.

After more than a year and a half of internal work, the attention paid off. Loophole in hand, Bell Canada waited for the right moment. When it put the plan into effect, Canada's Department of Communications was in disarray, with several top officials changing jobs. Summer vacations took their toll--a senior government lawyer says he cut off action on the Bell Canada case during a summer break. And Canada's leaders were preoccupied with a new anti-inflation program.

It took the CRTC almost two months to react publicly. The agency called for comment on Bell Canada's reorganization only days before stockholders approved the change. The minister of consumer and corporate affairs delayed a report by Canada's special anti-combines agency, publicly releasing it weeks after its internal publication. The report urged further study of the reorganization plan.

(CANADA BELL) Continued:

Consumer groups likewise are upset by the move. Andrew Roman, general counsel for the Toronto-based Public Interest Advocacy Center, says he's concerned that the new Bell Canada Enterprises and its shareholders will benefit from telephone expertise and industry connections gained at the expense of phone subscribers, who will have to pay ever-higher rates.

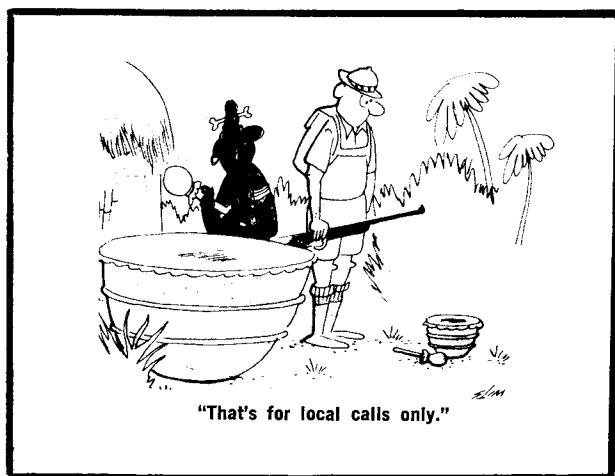
"It's analogous to someone taking off with the car and leaving his spouse with the payments," says Mr. Roman.

Hudson Janisch, a professor of communications law at the University of Toronto, says the government's belated reaction to Bell Canada's move results from the failure of Canadian authorities to set policies that deal with increased competition in telecommunications. "What we are getting is the worst of both worlds, where we don't have effective regulation of an integrated Bell Canada nor the opportunities for full competition, as in the U.S.," says Mr. Janisch.

Bell Canada maintains that the reorganization itself isn't subject to regulatory review because no such approval is needed under the general corporations act. Only shareholder approval, obtained last month, and court clearance are required, the company says.

A Montreal judge is expected to rule later this month on whether Bell Canada can indeed step around its overseers. The government has asked the judge to halt the final approval, but lawyers familiar with the situation are doubtful the government has much of a case.

If, as planned, the reorganization is completed by the end of the year, Ottawa has a final option. Canada's parliament can pass special legislation to undo the whole plan. As a CRTC official puts it. "There may be an omelet to be unscrambled." ☎



("On The Light Side," Telephone Engineer & Management, August 1, 1982)

POTPOURRI POTPOURRI POTPOURRI

—Connie Gentry, Emory University

Refreshed and renewed from a wonderful Florida vacation, I came back to Emory full of energy and enthusiasm; some of which I intended to channel into tidying up my desk and office. One thing you should know about my office...it looks as if the Battle of Atlanta was fought there. Throw in a touch of hurricane Camille and you've got the general idea.

At any rate, during the course of wading through the "mess," I made some interesting discoveries. Take professional journals, for instance. Now every telecommunications manager realizes that it is absolutely imperative that one stay on top of regulatory and technological developments. I get what I call the "Big Three," Telephony, Communications News, and Business Communications Review. (Better make that the "Big Four"... ACUTA News ranks right along side in importance!) In addition to which I receive either directly or through "pass along" the following: Trends in Regulatory Development, Trends in Telecommunications Management, The Consultant Liason Newsletter, The Communications Consultants Corporations of Virginia Newsletter, Computer Decisions, Data Communications, Administrative Management, and Today's Office.

My big discovery was this...there is absolutely no way to keep up with all that reading material! I need to hire someone to read all the journals and present me with an abstract, the way they do for President Reagan! Even better, why doesn't someone have a service in which all of these publications are on a computer. For a certain monthly or "per access" fee I could access their files with my computer and by entering the subject could get everything printed on that particular subject during the past month. That way I wouldn't have to wade through all the stuff I'm not interested in. It makes so much sense that surely someone will do it soon!

My second big discovery was I must be like the character "Pigpen" in the Peanuts comic strip because 3 days after I cleaned my desk it was in just as bad a condition as before! I must attract clutter!!

If you would like to have a digest of toll free (800) numbers write: Toll Free Digest, P.O. Box 800 (isn't that cute?), Claverack, N.Y. 12513. Individual copies are \$6.50 plus either \$1.50 if you want it sent UPS or \$.50 if you want it by regular mail. You may also order a case of 46 for \$3.50 per copy. The digest contains over 25,000 listings.

One of my ubiquitous professional newsletters reports that Bell of PA is offering to stabilize Centrex tariffs by offering their customers new three or five year contracts which would also offer a slight rate reduction initially. In Georgia the silence on the issue of Centrex is deafening. I have also heard of a Centrex III offering in Michigan. Naturally, I'm interested

(continued next page)

CENTREX: AT THE UNIVERSITY OF MICHIGAN-FLINT

"The following article is a presentation made by our fellow ACUTA member Ed Schon, Director of Campus Services at The University of Michigan-Flint during a regional meeting of College and University Telecommunications Managers in Traverse City, Michigan on October 12, 1982.

The subject of Ed's presentation was on Centrex III Rate Stabilization and the impact of American Bell on Bell's Marketing policies.-----Your Editor."

At the University of Michigan-Flint, I had prepared a PBX bid specification and was well into the bid process when Centrex III was announced. The main feature of the Centrex III plan is rate stabilization for Michigan subscribers from October 1, 1982 to October 1, 1985. All lines and central office feature rates are stabilized. Rates for usage and premise equipment will continue to be subject to rate increases. Touch-tone and all call transfer also become standard features. In the tariff, the Public Service Commission approved transfer from Centrex I or II to Centrex III without termination charges.

I have been told that the regulated portion of Bell will continue to support and even improve Centrex. An example is the intention to introduce a Centrex customer access panel to be used for some moves and changes.

All of this is a departure from what we had come to believe was the migration strategy: Price Centrex out of the market, lock in the customer on a Dimension contract until Antelope is available.

Now that Centrex rate stabilization plans are competing with Dimension, we are getting a preview of what competition will be like on January 1, 1983. I would caution any telecommunications decision maker to be sure they know where their Bell representative will be working on January 1, 1983.

At U of M and other schools represented at our Fall conference, we have already seen competition between the regulated and soon to be unregulated marketing groups. Future American Bell representatives want to sell us Dimension or a few Horizons to work behind our Centrex. Representatives staying with Michigan Bell are selling additional Centrex features that will hopefully satisfy a customer and prevent change to a PBX.

If you are considering Dimension or Horizon, you should inquire about national pricing, through A.B.I. (American Bell Inc.). It is likely that premise equipment, installed after January 1, 1983 through A.B.I., will be cheaper with unregulated national pricing.

My conclusion is that you must know what part of Bell you are dealing with and what plan (regulated, unregulated) you will be paying on.



"FOOD FOR THOUGHT"

Winners versus Losers:

A winner says: "let's find out".

A loser says: "Nobody knows".

A winner goes through a problem; A loser goes around it. A winner makes commitments. A loser makes promises.....

FROM THE BOARD

—Steve Harward

ACUTA members have spent numerous hours at work and in workshops and conferences in recent years evaluating the benefits of digital PBX's as a common switch for voice and data traffic. During this time, an old technology has resurfaced and has offered telecommunications professionals a viable alternative to the digital PBX's. Local area networks, or more specifically--broadband systems, using a coaxial cable as the distribution medium, have emerged as a popular means of mixing voice, data and even video communications on a common highway.

The popularity of this approach was evidenced by the attendance at a recent workshop on this subject at Brown University. Workshop planners anticipated an attendance of approximately 70 people and were pleasantly surprised to host about 200 registrants. Of this number, 30 registrants represented colleges and universities. Job responsibilities of the attendees ranged from those of telecommunications and data processing professionals to vice presidents of major corporations. Lone ACUTA members Janet Smith of Lehigh and myself took advantage of this opportunity to educate ourselves on the subject of L.A.N.'s and discovered the intense interest in this subject by the data processing community at colleges and universities.

The purpose of this commentary is obviously not to offer a technical review of LAN's, but to encourage each of you to evaluate your responsibilities as a telecommunications manager for the provision of this type of service on your campus. I suggest that a thorough review of this subject will point out to you the need to expand the traditional data and video related services. You can be assured that, if you neglect to participate in this development, others within your university will seize such an opportunity. You will be reading more on this subject in ACUTA News and other professional journals. Use this information to the best advantage of your university and yourself as a professional.

Best Wishes for a Happy Holiday Season. ☎

(POTPOURRI) Continued:

in what is happening to other Centrex users. If you can shed some light on the subject give me a call at (404) 329-4320 and I'll try and compile something for a future issue of ACUTA News.

The Holiday season is fast approaching so I hope you have a good, safe time and enjoy yourself immensely. I find it hard to imagine having a turkey dinner without a football game to watch, but I suppose stranger things have happened.

SEE YOU NEXT MONTH.... ☎

WORDS OF WISDOM:

"The man with a new idea is a crank until the idea succeeds."

.....Mark Twain

(The following article was taken from the October 6, 1982 issue of "MIS Week." Written by Robert Feldman)

BELL REP LETS 'ANTELOPE' RUN FREE AT SEMINAR

SAN DIEGO--It wasn't quite as good as a product announcement, but American Telephone and Telegraph Co. has at last used the magic word "Antelope" in public, thereby admitting the existence of the vaunted digital switch that the rest of the industry has known about for over a year.

The verbal breakthrough came near the end of a seminar at the Tele-Communications Association (TCA) conference here--the word coming trippingly from the tongue of an authorized Bell rep, Shelly Fishman, division manager for larger-user liaison.

In answer to a user's question about the switch, the man in the AT&T "uniform"--dark-blue pin-stripe suit, maroon tie and shiny black shoes--began with an explanation of Bell's "market architecture," which he said would be "forward- and backward-migratable."

Then he added: "We're now in a design process to work in Dimension DCS, and if we decide to go digital we will branch out into digital. We want the customer to be able to choose analog or digital. That's what this Antelope is all about. We haven't seen too many customers who really want digital. They just want to be able to talk to each other. And we don't overhang the marketplace. There won't be any more anti-trust cases on us."

The seminar, entitled "AT&T Marketing Strategies," was run by Fishman and a colleague, Rick Nye.

PLAN READY NEXT MONTH

Nye told the audience that the company might file its divestiture plan before the U.S. District Court in Washington as early as next month. He said the separation of the Bell operating companies (BOCs) would probably take effect Jan. 1, 1984, after approval by Judge Harold Greene.

The Phone Center stores now run by the BOCs, he said, would go to American Bell. Imbedded equipment stays regulated and stays in the BOC asset base through 1983, he said.

About AT&T's marketing plans for equipment, Fishman explained that "we have a strong preference for leasing complex systems" but the company was "seriously looking at outright sales of large Dimension PBXs" because "cash-flow becomes an issue" in the "cold start-up" of American Bell.

A user observed that the lease terms for the large Dimension he planned to obtain from his BOC were costlier than the purchase price and asked if he should wait until the dust settled. The AT&T men explained that American Bell would honor any agreement signed between now and January. The company would then allow him to choose either the current tariffed price or the future de-tariffed national price--whichever was lower.

SAVINGS FOR CUSTOMERS

"Dimension is overpriced today, and our savings will work down to the customer base," Fishman promised.

Would American Bell raise prices precipitously as a deregulated company? "That would be dumb for us as a new company," said Fishman, "We are honoring our current contracts, and that's 85 percent of the market. "As for the rest of the market, we're offering a price freeze for two years, or a transition to the national price level in steps."

Bell's plan, she asserted, would actually cost the company about \$500 million in price reductions and delayed revenue, as compared with the "normal, regular price increases" the company has expected to make.

In 1983, Fishman said, AT&T would contract with the BOCs for installation and maintenance of imbedded equipment.

"Say you have a Dimension and want to add 20 stations," he explained. "If the BOCs have the goods in inventory, they will sell and install it. If not, they will refer you to the 'Yellow Pages' to locate a vendor. If you ask specifically for Bell equipment they will give you a number for American Bell. Under the judgement, there is no sharing of information allowed between the entities (the BOCs and AT&T)."

The AT&T men conceded that, in the transition period, "if you have multiple vendors responsible for equipment in the same cabinet, you have a (maintenance) problem."

As for Bell accepting the role of "agency" for customers--with blanket contractual authority to assemble systems--Nye said AT&T would probably refuse that role, because it was prohibited by Computer Inquiry II and "because we can't afford it." ☎

PHONECENTER TRIVIA

It's considered sporting to take snipes at big companies, and columnists in The Chicago Tribune and Forbes, to name two, have jibed the Bell System for not having PhoneCenters either listed in the directory or capable of receiving incoming calls.

Several published explanations were offered. One saleswoman in a suburban New Jersey store told Forbes that the phone would ring constantly and slow service down in the store. An AT&T district manager of advertising was quoted: "Our problem was that there was no way we could list it in directories because there was no classification that it fell under. It's not like a grocery store or retail store or lingerie shop, you know."

However, beginning the end of this year, there'll be phones going into PhoneCenters; all part of the new competitive mode. As to why there were no phones in the Centers an official explained that people in the shop are entitled to the attention of clerks. ☎

INSIDE ACUTA

—Ruth Michalecki, Nebraska

INSIDE ACUTA is taking an in-depth look at the newly activated Telecommunications Management Control System at the University of Nebraska-Lincoln. However, to fully appreciate the magnitude of this highly successful project, you need to know our past history and where we started from. It will help you understand why we made certain decisions along the way.

We are an auxiliary or stores function and all charges are billed back to the users with a fixed overhead to cover our costs. We are responsible for all segments of telecommunications at our institution.

When we were smaller and didn't have our large toll network, our manual billing system worked fine. We would manually record on our ledgers all equipment charges, OC&C's, calls, etc., and bill these to the using departments by hand. The departments were billed for equipment rental one year in advance at the beginning of the fiscal year. Any changes in that equipment would be either charged or credited to them as it happened. However, over the years we grew and grew, but due to many factors, we couldn't add staff to our billing operation. Finally it became impossible to keep current. Instead of getting the bills out and funds encumbered at the start of the fiscal year, we were lucky to have them ready by the end of the third quarter--after their operating budget had been spent. Changes were being billed so long after the fact, that most departments had forgotten the work was even done and many times we were not able to collect since it was in a different fiscal year. Our cash-flow situation was simply intolerable! Our constant growth pattern caused our billing/inventory problems to spiral out of sight. It was obvious to everyone involved that we needed to do something and to do it quickly.

Our first attempt to automate left a lot to be desired and I wondered if we would ever get off the ground. We started with our in-house data processing staff and held planning meetings over the course of about one year. The end result was an estimated price tag of \$100,000 for design-programming, plus a completion date of 2 to 3 years. It soon became painfully clear to me that one of our major stumbling blocks on this route was a lack of a common language. They didn't understand our telephonese and I didn't know how to translate our language to theirs, in a timely fashion.

Our next choice was the local telco; using the data processing offered thru their business subsidiary. They were heavily involved in developing a data network for their own internal use and didn't have the time right then for us. It was also immediately apparent we would not have any checks and balances with this arrangement.

During one of our annual ACUTA Conferences, I attended a consultant's session on this very subject and felt this had a strong application for us. First, it was obvious we spoke the same jargon--not only did the consultant know what I was talking about, he had a broader understanding of the terminology than we did.

We had several preliminary meetings, discussing design, objectives, etc. The meetings expanded to include my staff, our accounting staff and the

INSIDE ACUTA, CONTINUED:

local telephone data processing staff. When all our concerns were answered to our satisfaction, we agreed upon a system design, time frame, price, and implementation procedures. We then proceeded to start what has proven to be the single biggest job we have ever had. Our data collection involved a total inventory of equipment in place; no small matter. I could write a book about all the problems we encountered along the way and about the mistakes we made--about how many times we had to start all over again. Probably the most difficult thing to deal with in building your data base is that all your routine work still has to be completed and on time.

Telecommunications Software, Inc., is the consulting firm we contracted to design and implement our billing system. Randall Manuel, the President of Telecommunications Software, Inc., is an ACUTA member. The remaining portion of this article is the result of an interview with Randy Manuel while he was in Lincoln recently doing the final implementation stages of our system. The interview was a question and answer forum and I have edited some of the responses to keep this article within length limitations.

INTERVIEW WITH RANDALL MANUEL

Q. Did the project at the University of Nebraska present you with any different challenges?

A. Every job is unique, but at Nebraska several challenges became apparent during our early design stage. It was clear a package software wouldn't meet the needs and we were faced with doing a custom design job.

Without getting too technical, let me describe a few of the problems. The biggest obstacle was on the equipment side, not usage. LT&T's equipment tape didn't follow the usual pattern of tariff codes and prices associated with a station number. Unlike the Bell system where the USOC is synonymous with a tariff and always linked with a number, the Lincoln tape was sorted by a concept they call "List Bill". The sort is on all numbers, equipment and prices associated with any one department or account and these are all grouped together under a "List Bill", which is one of the station numbers in the group. Any splitting of accounts required by the University had to be a manual split because the telco will not split List Bill groups into sub-groups. In 8½ years of doing system analysis for over 750 clients, this is the first time we had encountered this concept.

But you have to be realistic and know you can't change what the telco does, so we designed a system that allows you to control the bill. The "List Bill Master File" is a record of all stations, charges, quantities and costs by tariff code. It is matched with the telco List Bill Master and produces a variance report as the control factor. The variance report will highlight any changes in quantity & costs from the LT&T file as compared with the University File, on a monthly basis.

Added to that challenge was simply your massive volume. Over 1 million minutes of MERS traffic every month, over 1,000 separate accounts, plus 8,000 working stations and traffic from your large IN-WATS Network. We had to reformat 4 separate tapes from LT&T, a Digital IN-WATS Tape, Comm-Dev Tapes, the SMDR tape from Bell and then produce a detailed bill for departmental usage and produce a mag-tape to interface with the general ledger system for intramural accounts.

INSIDE ACUTA, CONTINUED:

Q. Can you briefly describe the reports on our system and their purpose?

A. You have six basic reports.

1) Departmental Invoice: This summarizes the call detail usage by station number. It shows date, time of day, place & number called, minutes and type of call (whether MERS, DDD, Credit Card, etc). It also shows the cost of the call and the MERS savings achieved, if the call was placed on the MERS Network. This report also has equipment charges, OC&C's and adjustment detail. This invoice has all necessary cost center detail and a billing reference number.

2) Intramural Summary Report: This is a report for Accounting purposes. Simply shows the object code for the expenditure and the total amount billed against that account. It is the cover sheet for the departmental invoice. The mag-tape for interface with the general ledger system is produced from this report.

3) Departmental Summary: The purpose of this summary is to track all elements of expenses and produce them on a current month usage and year-to-date usage by account number and by departments within a larger division. This information is summarized on a one-liner report and sent to persons with budget responsibilities for divisions, colleges, etc. It provides an excellent management tool for the telecom director. However, it requires considerable time and effort to build the data base needed to support this report.

4) ARS Summary: Summarizes all usage on the MERS Network by state and university, on a trunk basis. Lists traffic by minutes and number of calls on each facility; shows overflow completion by alternate facility within the ARS. Provides a data source for charting usage trends and patterns on a monthly basis and by the year.

5) Circuit Analysis: Shows all traffic by minutes and call numbers per circuit, for each hour and day. Purpose is to verify usage and determine volume per circuit. Important in knowing when circuits are out-of-service.

6) Geographical Analysis: Analyzes all the traffic on MERS Network, sorts by WATS Bands, by City & State and by area codes. Compares actual costs against DDD equivalency and shows cost avoidance results achieved by MERS. Will help isolate potential new FX locations. Most useful for doing manual optimizations.

In addition, to control the equipment side, variance reports were developed to match activity in any given month to the past month's records. The variances will be highlighted on this report. Another report guarantees that no account will be billed if a proper cost center is not identified. This is a complicated report and would take too long to explain its functions in detail. The variance reports are mainly designed to retain the integrity of the system.

Q. You mentioned manual optimization. Can you tell our readers how you arrive at an optimal mix of facilities in a least cost routing system?

A. We approach this by answering three basic questions:

-- 1) How much will all calls cost if no network?

2) How much if network consists of all WATS?

3) How much if network consists of all FX/Tie? We bring all the data together to determine the optimal configuration of FX, radius FX, Tie-lines, WATS and DDD overflow (both with queue and without). You told me you were given an estimate of rate increases for intrastate WATS showing an increase of 121% over present costs. Think how vital it will be for you to optimize your intrastate traffic to lessen the impact of that increase.

Q. Do you feel it is important to show costs savings on a department's invoice achieved by using networks for calls?

A. Yes. In your case, an earlier decision to provide tie-lines for traffic between Lincoln and Omaha at no direct costs to the users will make your department look like a winner. I am sure your cooperative shared network has been a good benefit. By not concerning yourself with who owns the network, you have managed to afford enormous savings to the University, State Government and City-County Government. These savings will even be greater when you add the volume from your future resale operation. Overall costs to all of your users will come down, especially when you can load your FX and Tie-lines with all that off-hour traffic.

Q. What are some of the careless habits and/or cautions for people who are on line now or going on line?

A. Improper documentation of changes. My first advice to users is not to take notes or changes over the phone. Have them sent in writing, enter the changes on a pre-designed form before you make the changes on-line. Verify your changes thru a print-out of what you did thru the screen. This is so easy to overlook--people get tired of the effort and they say, well, lets go with what we have and if there are problems, we will discover them when we issue the bill. You cause all kinds of problems for yourself when you send out bad bills--poor public relations, your future bills are always questioned, etc. You must take the extra time and effort to produce a correct bill, be sure your data is correct and well-documented.

Schedule a cut-off date. This starts at your office. You can't expect the same turn-around time from your data processing staff if you are continually changing your run date. Establish a firm run date. Establish a reasonable time frame between last date for changes and the run date. Stick to both!

Q. What is the biggest shock anyone encounters when they start to automate the billing system?

A. The time factor, without a doubt. Anytime you purchase a custom-design system, you will have a time requirement for the design. Also the amount of time it will take to build the data base is always a shock. Unfortunately it can't happen in any other way; it simply takes time to design and time to collect and build data bases---and all during this time, your regular work continues.

Q. I have been impressed at how true the original design has been---really almost no changes.

A. This is the result of well-thought-out objectives and the cooperative work between the telecommunications director and the analyst.

Q. By the way, during our many sessions, have we gained another "BIG RED" fan.

A. YES! I seem to live and die with Big Red and this year I am living very well!

